education

FROM THE JOURNALS Edited highlights of weekly research reviews on https://bit.ly/2PLtil8

Non, je ne regrette rien

I've been a GP for so long that I can't remember why I chose it as a specialty in the first place. All I know is that I have no regrets—not often, anyway. One useful piece of information in making an informed career choice would be to know which specialties in medicine have the highest rates of burnout and career regret. A prospective cohort study of 3588 US second year residents (equivalent to foundation year 2 in the UK) found nearly half (45.2%) reported symptoms of burnout and 14% regretted their career choices. But the measures of burnout and regret varied hugely depending on which specialties the residents were working in. Doctors in urology, neurology, emergency medicine, and surgery were more fed up than those in dermatology, pathology, and internal medicine. More work is badly needed to understand what makes for a happy doctor who can flourish at work and get to the end of their career without major regrets.

JAMA doi:10.1001/jama.2018.12615

Doctors doctor while scribes scribe

Here's one practical idea to prevent burnout. A scribe! How biblical that sounds, conjuring an image of a bearded man wielding a quill and parchment. In reality, scribes wear modern dress and act as a personal assistant, entering information into the electronic health records while the doctor gets on with the job. A 12 month crossover study in the US randomly assigned medical scribes to some primary care physicians and not others, and then swapped them over every three months for a year. Unsurprisingly, the periods with a scribe resulted in the physicians spending less time catching up on their health record work and more time interacting with the patient (rather than staring at the computer). I'm not convinced that I'd like a scribe; writing up a consultation helps me to organise my thoughts and check the management plan. But I guess you get used to thinking out loud.

JAMA Intern Med doi:10.1001/jamainternmed.2018.3956

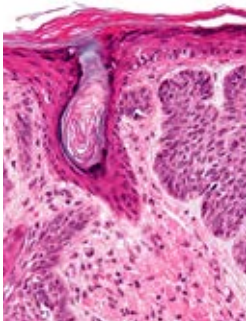
https://www.scribeamerica.com/what_is_medical_scribe.html

Obesity: what's to be done?

We all know that the population is getting fatter. But what on earth can we offer our obese patients? What works apart from bariatric surgery? The US Preventive Services Task Force reviewed the evidence on behavioural and pharmacotherapy interventions that are available in primary care in the US. It concludes with "moderate certainty" that behavioural interventions have a "moderate net benefit" in obese adults (BMI >30). It's hardly a magic bullet, but it's the best that we can offer without surgery. Disappointingly, the nature of the data means that you can't say how many sessions and which format works best (face to face, or remote, group, or individual). It's so much easier said than done.

JAMA doi:10.1001/jama.2018.13022

Common treatments of basal cell carcinoma are much of a muchness



Which treatment option would you opt for if you developed a basal cell carcinoma (BCC)? Most interventions for BCC haven't been compared in head-to-head randomised trials. This review of studies evaluated the comparative effectiveness and safety of treatments of primary BCC in adults. The results support the effectiveness of commonly used methods for low risk BCC: surgery, external beam radiation, topical imiquimod, and curettage and diathermy. The ideal management of high risk BCC subtypes remains uncertain. Further research is required, and I'm none the wiser as to which treatment I'd opt for if/when I get a BCC; I'd probably leave it to the dermatologist to decide.

Ann Intern Med doi:10.7326/M18-0678

A clear question, with a clear answer

In children who develop bronchiectasis, non-severe acute exacerbations are usually treated with amoxicillin-clavulanate (Augmentin), but the authors of this study say that azithromycin is also often prescribed because of its convenient once daily dosing. They wondered if azithromycin was as effective as amoxicillin-clavulanate, couldn't find any head-to-head studies, and so did one. Simple question with a simple answer; azithromycin is basically fine as an alternative. By 21 days of treatment, 83% of exacerbations had resolved in both groups (though more quickly with amoxicillin-clavulanate). Azithromycin is a good option for children who are allergic to penicillin, and once daily dosing is a big advantage in some families. It must be balanced against a risk of treatment failure, longer exacerbation duration, and the risk of inducing macrolide resistance, say the authors. If only all research asked a clear, relevant question that yielded a straightforward, practical answer.

Lancet doi:10.1016/S0140-6736(18)31723-9

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What interventions are effective to taper opioids in patients with chronic pain?

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CPD READING
0.5 HOURS

Opioids are commonly prescribed for short term pain relief in people with chronic pain (not caused by cancer). If they are used long term, most patients develop tolerance, their pain increases, and clinicians gradually escalate the dose (figure). Media have reported the harms of dependence[2 3] and the increasing number of deaths from accidental overdose.[4-10] Other long term harms include immune suppression, hormonal imbalance, falls and fractures, acute myocardial infarction, addiction, sedation, and cognitive impairment.[1]

There is very little guidance on withdrawing or tapering opioids in chronic pain (not caused by cancer). People can fear pain, withdrawal symptoms, a lack of social and healthcare support, and they may also distrust non-opioid methods of pain management.[1 2]

In this article, we focus on interventions to help people with chronic pain on prescription opioids who may wish to reduce or discontinue their opioid intake because of ineffectiveness in pain management and/or living with side effects caused by the opioids.

HOW PATIENTS WERE INVOLVED IN THE CREATION OF THIS ARTICLE

We consulted four people with chronic non-malignant pain who have undergone opioid tapering. Patients were recruited from the patient and public involvement team in the I-WOTCH study, University Health Network, Toronto Rehabilitation Institute (Canada), and South Tees NHS Foundation Trust (UK). They commented on a draft of this article and shared their experiences of being prescribed opioids and then tapering. They stressed the need for guidance on how to start opioid tapering safely, how quickly tapering progresses, and the role of self help groups in providing support and distraction techniques (for when the person is part way through their dose reduction). A patient reviewer suggested further research on self help pathways in tapering opioids and how healthcare providers may support patients in this. We have included this as an area for further research.

What is the evidence of uncertainty?

A systematic review and a Cochrane review[16 17] have evaluated interventions to support opioid tapering in patients with chronic non-malignant pain. Interventions included interdisciplinary pain management programmes, acupuncture, buprenorphine or ketamine assisted dose reduction, and behavioural strategies such as motivational interviewing, cognitive behavioural therapy, mindfulness, and pain education in pain self management. The quality of evidence is very low because of methodological limitations of studies, variable interventions, and outcome measures overall. Meta-analysis was not possible.

Nearly all trials on supported opioid withdrawal in chronic pain are poorly designed, have a short follow-up (≤4 months) and high dropouts because of side effects.[18] Opioid discontinuation rates vary widely, and there is no good quality evidence to suggest effectiveness of these interventions on patient outcomes such as pain severity, function, and quality of life.

Is ongoing research likely to provide relevant evidence?

We searched the UK clinical trials gateway and clinical trials.gov, Medline, Embase, and Cochrane Database in March 2018 for non-pharmacological interventions for opioid tapering or withdrawal in adults with chronic pain. We found two ongoing trials.[21 22] Both studies will test self management interventions for people with non-malignant pain over 12 months and measure outcomes such as opioid use (morphine equivalent doses, pain interference, and pain intensity). Results will be informative to people tapering, or planning to taper opioids.

Public Health England has commissioned a report, due in 2019, which will bring together evidence on prevention and treatment of opioid dependence.[25]

WHAT YOU NEED TO KNOW

- For people with chronic pain and who do not have cancer, the benefits of long term opioids are outweighed by the issues of tolerance, dependence, and the requirement for higher doses
- Tapering is the gradual reduction of opioids with the aim of limiting withdrawal symptoms; it may target complete discontinuation of the opioid, or on occasion a reduction of the dose
- It is not clear how best to support people to taper their opioids; whether it is best done by interdisciplinary pain management programmes, buprenorphine substitution, or behavioural interventions

What should we do in light of the uncertainty?

Various guidelines offer advice on prescribing in chronic pain, including recommendations on what to document and how to report adverse events.[26]

Limit prescribing, which is unlikely to offer benefit—Avoid opioids for pain relief in people at high risk for opioid use disorder, such as those with an active or previous substance use disorder, or a psychiatric disorder.[27]

Explain the harms of long term opioid use and enable access to non-pharmacological pain management interventions—Provide clear advice on the high potential for physical dependence and its consequences.

Monitor the benefits and harms—Once prescribed, monitor patients on opioids for pain relief. Ask about adverse effects such as overdose, motor vehicle accident, addiction, sleep apnoea, osteoporosis, drowsiness, constipation, dizziness/vertigo, hypogonadism/sexual dysfunction, vomiting/nausea, opioid induced hyperalgesia, and dry skin/pruritus.

Offer patients taking opioids for chronic pain a trial of supported opioid tapering—The box below suggests when to consider tapering, based on the US Department of Health and Human Services.[28]

Taper opioids—Abrupt opioid cessation can be associated with unpleasant physical and emotional symptoms (opioid withdrawal) lasting typically up to two weeks.[29] Slow and monitored tapering can minimise these effects.[30] Tapering is usually carried out by reducing a small percentage (10%-20%) of the total dose every week, and the duration of the tapering depends on the starting dose. A person starting on a dose of 100 mg of morphine per day may take up to 14 weeks to discontinue the drug.

One way to taper is to rotate opioid to reduce the dose.[27] Refer patients who are at higher risk, and provide access to appropriate psychosocial support.

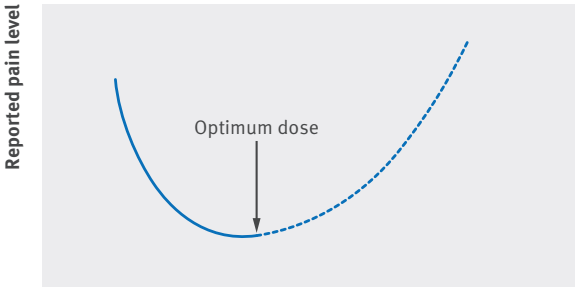
Opioid withdrawal is not life threatening; however, precautions are advised in high risk patients such as pregnant women, those with opioid use disorder, unstable coronary artery disease, or unstable psychiatric disease.[30] Risks include over-stimulation of the sympathetic system, which may result in tachycardia, piloerection, nausea, vomiting, and agitation.

When to consider tapering of opioids

- The patient requests dosage reduction
- No clinically meaningful improvement in pain and function
- Patient is on dosages ≥ 50 mg of morphine equivalent daily without benefit or opioids are combined with benzodiazepines
- Signs of substance use disorder (eg, work or family problems related to opioid use, difficulty controlling use)
- Patient experiences overdose or other serious adverse event, or shows early warning signs for overdose risk such as confusion, sedation, or slurred speech.

WHAT PATIENTS NEED TO KNOW

- For most people with chronic pain, the long term harms of opioid drugs are greater than the benefits. Non-drug alternatives to pain management are preferable to starting opioid drugs.
- Coming off long term opioid treatment can be challenging. If you are taking opioids for pain relief, discuss with your doctor a plan for reducing the dose of opioids (tapering) before starting the process of withdrawal.
- It is best to gradually reduce the dose you are taking (tapering).
- There is a lack of robust evidence on which interventions are effective in supporting tapering of opioids.
- Having a good support network to manage the residual pain or the withdrawal mediated pain is important.
- Picking a start date and selecting an appropriate time frame to allow slow and safe opioid tapering are essential for successful tapering.
- In some cases, successful tapering will occur after a few unsuccessful attempts.



Long term use of opioids leads to tolerance and increased levels of pain

When starting to discuss tapering use reasons that are convincing and true to that person. For example, explain that the opioid the patient is using every day may be contributing to the worsening of their chronic pain (opioid induced hyperalgesia), loss of libido (hypogonadism), general fatigue, or sleep apnoea. This may make the patient more receptive to opioid tapering.

"Perhaps the opioid is making your pain worse and requiring higher doses for pain relief. We can try to lower the dose. I believe you will feel better, but it will be hard in the first few weeks because of the withdrawal symptoms, and because your body will need to start producing endogenous opioids again and that will take time. We can taper very slowly, and we can pause for a few weeks or months if it is necessary."

Discuss how to taper, anxieties about stigma, as well as fear of withdrawal symptoms.

Consider the social impact on the patient (for example on family and employment) and work with the patient to plan withdrawal, including a discussion of when is an ideal time to start the tapering process. Explore their concerns, barriers, motivation, and opportunities.[31] Where the patient is having difficulties with tapering, offer support, reassurance, pause the taper, and find alternatives to manage the pain.

It is important to recognise that some patients may not do well after an appropriate trial of tapering because of withdrawal symptoms, and therefore their opioid use would need to be reconsidered.

Competing interests: See bmj.com.
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Find the full version with references at http://dx.doi.org/10.1136/bmj.k2990

EDUCATION INTO PRACTICE

- Think of the last time you gave a prescription of opioids for chronic non-malignant pain. What non-pharmacological options had you explored first?
- How do you provide information about the benefits, risks, and tolerance of long term opioid therapy? Does this article offer you ideas on doing so differently?
- How do you discuss tapering and discontinuation opioids in cases where the opioid is no longer working? Does this article offer you ideas on doing so differently?

ROSE LLOYD

WHAT YOUR PATIENT IS THINKING

Stepping up to adult services

CPD READING
0.5 HOURS

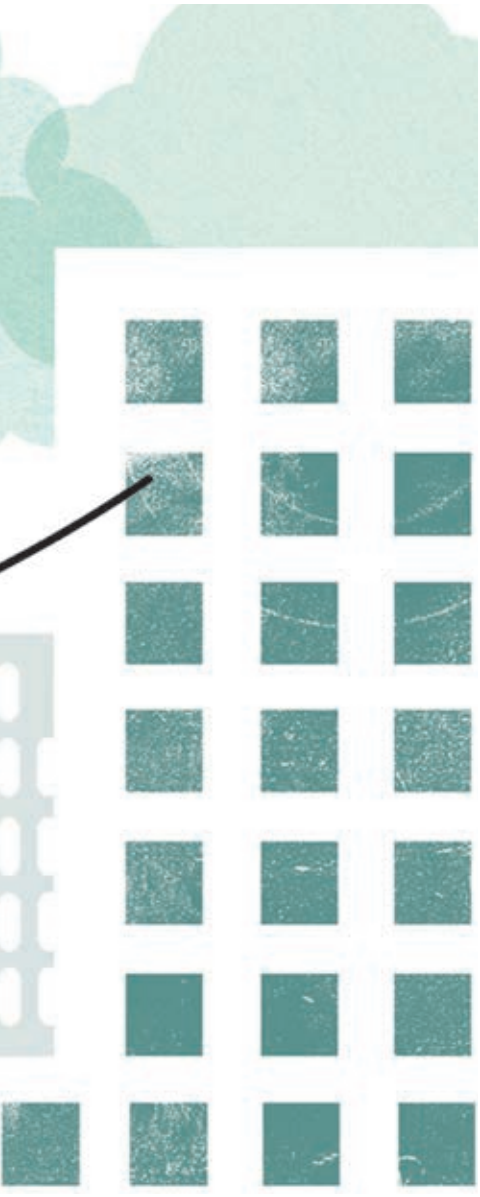
Moving from children's to adults' services can be difficult. **Lucy Watts** considers what might have made her transition smoother

I was born with a complex, life limiting condition. At 14 I became disabled, and at 15 I had started tube feeding, which was a big adjustment. I desperately needed support. A few weeks after my 16th birthday, my mother and I arrived at hospital for what I thought would be another routine appointment with my paediatrician. At that meeting I was told that because of my age I was being discharged from children's services. As I was wheeled out of that appointment I felt I was no longer a paediatric patient but not yet an adult. It seemed as if I had no team to take over my care; what was I going to do?

Suddenly, I was being asked to advocate for myself and manage my care

Sudden change

The shock was immense. As a paediatric patient, I relied on my mother to do all the phoning, liaising, and advocacy that ensured I got the care and support I required. Inpatient admissions took place on a paediatric ward where my mother could stay with me—making decisions with me, supporting me, and providing much of my care. Even though I was 14 when I became seriously ill, I don't remember discussions about transition to adult care. Suddenly, I was being asked to advocate for



myself and manage the coordination and organisation of my care, but I didn't feel that I had the support to be able to answer the questions.

The adult ward

The differences between paediatric wards and adult wards proved even more traumatic. At 17 years old, I found myself on a ward with five patients who had dementia and who cried and yelled much of the time. My mother was only allowed in at visiting times, so I had to make important decisions on my own. I had to sign my own consent forms for the first time. I felt alone and scared. I had no television, internet connection, or radio signal, and I was unable to leave the ward. I couldn't do anything independently and I couldn't escape.

What would have helped

So what did I need to make my transition better? Firstly, I needed the process to have started earlier—from when I first became seriously ill at 14 and it was clear I would need long term care—and the change needed to be taken at my own pace. Secondly, I needed a transitional care plan developed with me and my mother and coordinated by a consultant, specialist, community nurse, or family doctor.

Children undergoing this transition need support to empower them to step up when able and take charge of their health and care, and for parents to step back when applicable.

During consultations, health professionals might ask parents to step out for some of or all of the appointment to enable young patients to get used to consulting alone. This might help young patients to learn advocacy for themselves and for parents to learn how to let their emerging adult child take the lead. Peer support groups and mentoring—face to face or via social media, Skype, telephone, email, or text message—can help build these skills. Putting young adults in contact with patients who have already made the transition to adult services allows them to exchange experiences and mentors to offer guidance.

At 17 years old, I found myself on a ward with five patients who had dementia

For me, like other people with complex, intensive needs, it would have been helpful to have had a parent stay in hospital—or at least to have been asked if I wanted to have a parent there for ward rounds and other important parts of admission. Being put in a side room would have prevented me from hearing the distressing noises of the patients with dementia.

When I was 17 the staff of the young adult hospice began to support me and they taught me crucial skills in self advocacy. They appreciated my desire to have my mother involved and treated me like an adult, but they understood that I was inexperienced, vulnerable, and scared. They checked to see that I wasn't overwhelmed and asked what my wishes were—for example, did I want my mother present? Would I like to speak about this without her? They saw the big picture and it helped me.

Transition is a process, not a single event. When done right it sets the scene for a young person's care in adult services. When it is done wrong a young patient might not be able to cope and may even disengage from services. Becoming an adult is a process that continues over years. Young adults aren't big children nor are they little adults; they are a unique subgroup of the population and need to be treated as such.

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EDUCATION INTO PRACTICE

- How have you been involved in the care of young people as they move from children's to adults' services? Can you think of situations where this has gone well and not so well? What themes link these examples?
- What insights or ideas does this article offer you on what might be important to young people in this transition?
- How do you think you could better support young people to move from children's to adults' services?

These questions were developed by the editors and reviewed by the patient author

FURTHER INFORMATION

Stepping up by Together for Short Lives
www.togetherforshortlives.org.uk/

Transition checklist by Together for Short Lives
www.togetherforshortlives.org.uk/changing-lives/developing-services/transition-adult-services/

National Institute for Health and Care Excellence. Guidance: transition from children's to adults' services for young people using health or social care services
www.nice.org.uk/guidance/ng43

Singh SP, Anderson B, Liabo K, et al. Supporting young people in their transition to adults' services: summary of NICE guidance. *BMJ* 2016;353:i2225, doi:10.1136/bmj.i2225

WHAT YOU NEED TO KNOW

- Transition is a process, not a single event, and it takes time, planning, support, and children's and adults' services working together
- Stepping up is a process that takes time; you must be prepared and support young people with the shift in responsibility
- Try to establish how much responsibility a young person might want or can manage, and be gentle with them if they struggle

Chronic heart failure in adults: summary of updated NICE guidance

CPD READING
0.5 HOURS

Jacqui Real,[1] Emma Cowles,[1] Anthony S Wierzbicki,[2] on behalf of the Guideline Committee

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The prevalence of heart failure is increasing because of an ageing population and improved survival of chronic diseases that contribute to heart failure. Heart failure includes reduced ejection fraction (<40%) and preserved ejection fraction (>50%) disease. The National Institute for Health and Care Excellence (NICE) guideline on chronic heart failure was last updated in 2010. Since then, further evidence on novel and existing therapies—for example, mineralocorticoid receptor antagonists (MRAs), has emerged. New research has also been published on diagnosing heart failure and approaches to heart failure care, including monitoring, rehabilitation, and the composition of the multidisciplinary team.

This article summarises the latest update of the NICE guideline on chronic heart failure in adults.[1] Evidence levels for the recommendations are in the full version of this article on bmj.com.

HOW PATIENTS WERE INVOLVED IN THE CREATION OF THIS ARTICLE

Committee members involved in this guideline included people with heart failure who contributed to the formulation of the recommendations summarised here.

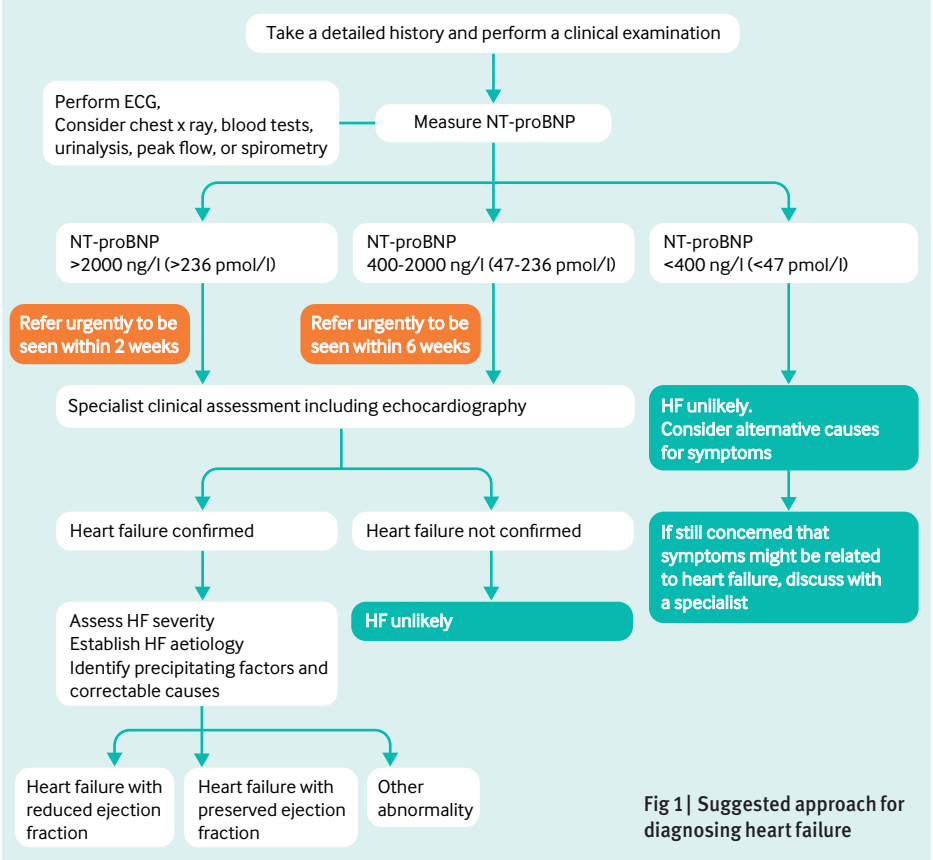


Fig 1 | Suggested approach for diagnosing heart failure

Diagnosing heart failure

Figure 1 details a pathway for investigating and diagnosing heart failure.

- Measure N-terminal pro-B-type natriuretic peptide (NT-proBNP) in people with suspected heart failure:
  - NT-proBNP >2000 ng/L (236 pmol/L): refer urgently, to have specialist assessment and transthoracic echocardiography within two weeks.
  - NT-proBNP 400-2000 ng/L (47-236 pmol/L): refer to have specialist assessment and transthoracic echocardiography within six weeks.
- Perform an electrocardiogram in all people with suspected heart failure and consider a chest radiograph, blood tests and urinalysis, and peak flow or spirometry as part of the diagnostic investigation, as necessary.

WHAT YOU NEED TO KNOW

- Refer people with suspected heart failure and N-terminal pro B-type natriuretic peptide (NT-proBNP) greater than 400 ng/L for specialist assessment and transthoracic echocardiography within 6 weeks.
- Offer angiotensin converting enzyme (ACE) inhibitors and β blockers as first line treatment for heart failure with reduced ejection fraction, and add mineralocorticoid receptor antagonist (MRA) if symptoms continue.
- Offer exercise based cardiac rehabilitation treatment to people with stable heart failure in a format and setting that is easily accessible.
- Provide management in primary care once the person's condition is stable, with advice from specialist heart failure teams (MDTs).
- People with heart failure do not routinely need to restrict their sodium or fluid consumption.

Box 1 | Information to include in summary and care plan (new recommendations 2018)

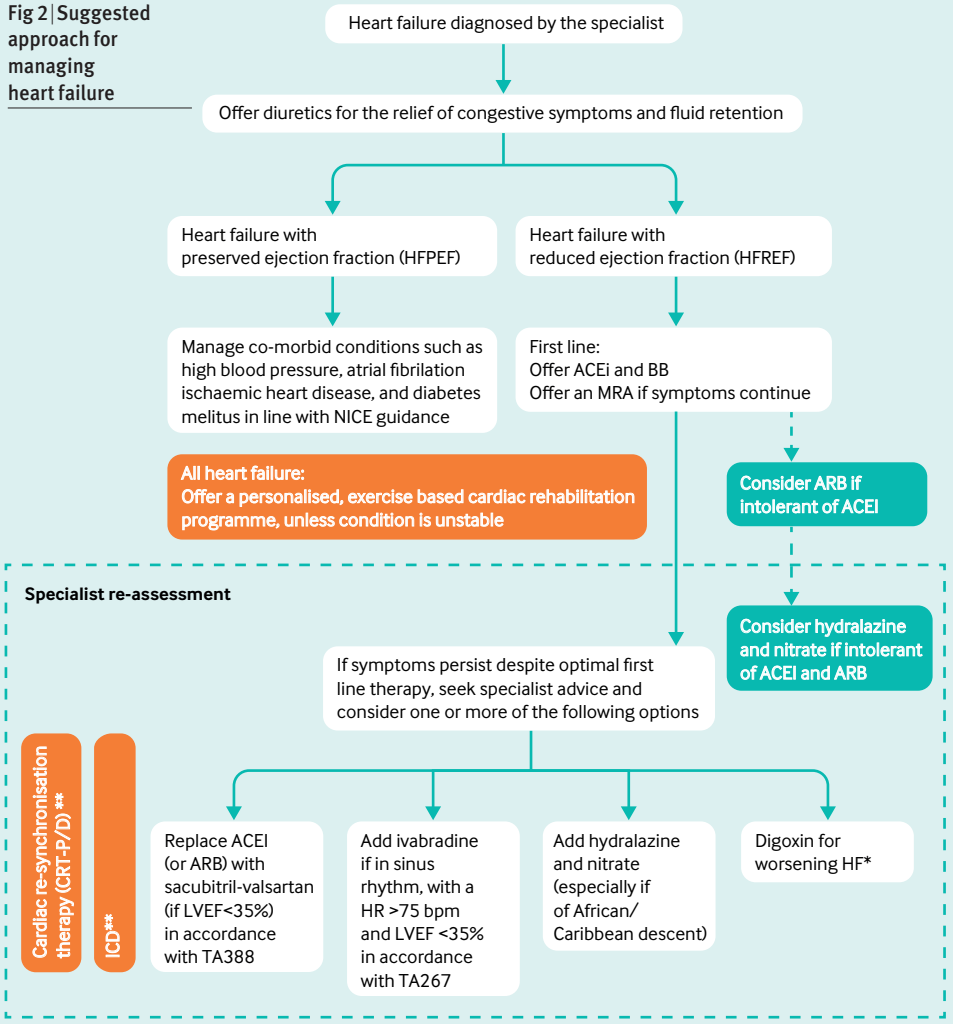
Summary—a brief summary of key clinical problems for the electronic medical records

- Diagnosis and aetiology
- Medicines prescribed, monitoring of medicines, when medicines should be reviewed, and any support the person needs to take the medicines
- Functional abilities and any social care needs
- Social circumstances, including carers' needs.

Care plan—a multidisciplinary document, shared with the patient, that includes clinical and social factors affecting their health

- Plans for managing the person's heart failure, including follow-up care, rehabilitation, and access to social care
- Symptoms to look out for in case of deterioration
- A process for any subsequent access to the specialist heart failure MDT, if needed
- Contact details for
  - a named healthcare coordinator (usually a specialist heart failure nurse)
  - alternative local heart failure specialist care providers, for urgent care or review
- Additional sources of information for people with heart failure, such as the British Society for Heart Failure, British Heart Foundation, and Pumping Marvellous.

Fig 2 | Suggested approach for managing heart failure



*Please refer to CG180 for recommendation on the use of digoxin in patients with atrial fibrilation
** In accordance with TA314

Managing heart failure

Multidisciplinary approach

Heart failure is a complex condition. The committee sought to establish the key competencies for the MDT, and to clarify the roles of primary and secondary care.

- The core specialist heart failure MDT should work in collaboration with the primary care team, and should include
  - A lead physician with subspecialty training in heart failure (usually a consultant cardiologist) who is responsible for making the clinical diagnosis
  - A specialist heart failure nurse
  - A healthcare professional with expertise in specialist prescribing for heart failure.
- The specialist heart failure MDT should directly involve, or refer people to, other services including rehabilitation, services for older people, and palliative care, as needed.
- The primary care team should take over routine management of heart failure as soon as the person is stable and management has been optimised.

What to include in a care plan

Heart failure is a chronic progressive condition. People with heart failure can be admitted or referred to secondary care to address deterioration and are then referred back to primary care once they are stable. They often have other co-morbidities that may be relevant to management of their heart failure—for example, chronic kidney disease and chronic obstructive pulmonary disease. Managing the associated information has become a complex process with roles and responsibilities sometimes unclear.

- The specialist heart failure MDT should write a summary for each person with heart failure.
- The summary should form the basis of a care plan for each person.
- Give a copy of the care plan to the person with heart failure, their family or carer if appropriate, and all health and social care professionals involved in their care.

For a summary of what to include in the summary and care plan see box 1. Complete the care plan when a person is first diagnosed with heart failure (initiated by the lead clinician) and update as necessary; for example, as a result of a request by patient or general practitioner.

Box 2 | Lifestyle advice and interventions

Salt and fluid restriction

- Do not routinely advise people with heart failure to restrict their sodium or fluid consumption. Ask about salt and fluid intake and, if needed, advise as follows:
  - People with dilutional hyponatraemia should restrict fluid intake
  - People who consume high levels of salt and/or fluid should reduce their intake.

Continue to review the need to restrict salt or fluid.

- Advise people with heart failure to avoid salt substitutes that contain potassium (eg, LoSalt or Nu-Salt)
  (New recommendation 2018)

Cardiac rehabilitation

Rehabilitation programmes need to be structured, with clear objectives and a monitoring component.

- Offer people with heart failure a personalised, exercise based cardiac rehabilitation programme, unless their condition is unstable.
  (Updated recommendation 2018)

Box 3 | Clinical monitoring of heart failure

- Clinical assessment of
  - Functional capacity
  - Fluid status
  - Cardiac rhythm (minimum of examining the pulse)
  - Cognitive status and nutritional status.
- Medication review including need for changes and possible side effects.
- Consideration of NT-proBNP measurement as part of a treatment optimisation protocol—only in a specialist care setting for people aged under 75 who have heart failure with reduced ejection fraction and an eGFR above 60 ml/min/1.73m^2.

Pharmacological management

The treatment of heart failure symptoms often involves the use of loop diuretics (eg, furosemide), and long term treatment for prognostic benefit is based on using agents affecting the renin-angiotensin-aldosterone and other neurohormonal systems (fig 2). The committee considered the latest evidence on MRAs, particularly adding an MRA to existing first line treatment in people with heart failure. Spironolactone and eplerenone are licensed MRAs for use in heart failure.

- Offer MRA, in addition to ACE inhibitor (or ARB) and β blocker, to people who have heart failure with reduced ejection fraction if they continue to have symptoms of heart failure.

The committee did not make any recommendation on the use of MRAs in heart failure with preserved ejection fraction.

See box 2 for further recommendations on lifestyle advice and interventions.

GUIDELINES INTO PRACTICE

- How do you use NT-proBNP currently in suspected heart failure? Does this guideline offer you ways to adapt your practice?
- How do primary and secondary care services share the work of supporting people with heart failure currently? Do the recommendations in this guideline offer you ideas on how to modify your working, or local pathways?
- What treatments and advice do you typically offer to patients with heart failure? Does this guideline suggest different management strategies? How might these work in your setting?
- Can patients with heart failure access cardiac rehabilitation (either at home, in the community, or in the hospital) in your local area?

How to monitor heart failure

All people with heart failure require clinical review and monitoring (box 3). More detailed monitoring will be needed if the person has substantial co-morbidity or if their condition has deteriorated. The frequency of monitoring depends on the clinical status. The monitoring interval should be short (days to two weeks) if the clinical condition or medication has changed, and at least six monthly for people with stable heart failure. Provide people who wish to be involved in monitoring their heart failure with sufficient education and support to do this, with clear guidance on what to do in the event of deterioration.

When commencing ACE inhibitors, angiotensin-II blockers, and MRAs:

- Start therapy at a low dose and titrate upwards at short intervals (for example, every two weeks) until the target or maximum tolerated dose is reached.
- Measure serum sodium and potassium, and assess renal function, before starting treatment and one to two weeks after, and following each dose increment.
- Measure blood pressure before and after each dose increment. Follow the recommendations on measuring blood pressure, including measurement in people with symptoms of postural hypotension, in the NICE guideline on hypertension in adults.[2]

Palliative care for advanced heart failure

The disease trajectory for people with heart failure is difficult to predict, with periods of stability punctuated by episodes of acute deterioration within a gradual overall decline. There has been increasing interest in prognostic tools to try and identify people who are entering the last year of life.

- Do not use prognostic risk tools to determine whether to refer a person with heart failure to palliative care services.
- If the symptoms of a person with heart failure are worsening despite optimal specialist treatment, discuss their palliative care needs with the specialist heart failure multidisciplinary team and consider a needs assessment for palliative care.

Breathlessness is a common symptom in advanced heart failure, even with optimal pharmacological and non-pharmacological treatments and the absence of clinical pulmonary oedema.

- Do not offer long term home oxygen therapy for advanced heart failure.

Competing interests: We declare the following interests based on NICE's policy on conflicts of interests (available at https://www.nice.org.uk/Media/Default/About/Who-we-are/Policies-and-procedures/declaring-and-managing-interests-board-and-employees.pdf): JR, and EC have no relevant interests to declare. ASW provides a full statement in the NICE guideline.

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Find the full version with references at http://dx.doi.org/10.1136/bmj.k3646

MINERVA WELCOMES SUBMISSIONS

Minerva pictures are cases which offer an educational message, and are of interest to a general medical audience (See p 418). They should be submitted as "Minerva" via our online editorial office (see bmj.com) and should follow our advice on submitting images. Please provide two or three sentences (no more than 100 words) explaining the picture, and send us the signed consent to publication from the patient. We require written consent from every patient, parent, or next of kin, regardless of whether the patient can be identified or not from the picture. For more information see http://www.bmj.com/about-bmj/resources-authors/article-types

If you would like to write a Case Review for Endgames, please see our author guidelines at http://bit.ly/29HCBAL and submit online at http://bit.ly/29yyGSx

SPOT DIAGNOSIS **Two abnormalities on diagnostic laparoscopy**

A 29 year old nulliparous woman presented with a two year history of cyclical pelvic pain and dyspareunia. She underwent a diagnostic laparoscopy to identify a cause for the pain, and this revealed two gynaecological abnormalities (fig 1). What are these abnormalities?

Submitted by Richard Keedwell and Dominic Byrne

Patient consent obtained. Cite this as: *BMJ* 2018;362:k3655

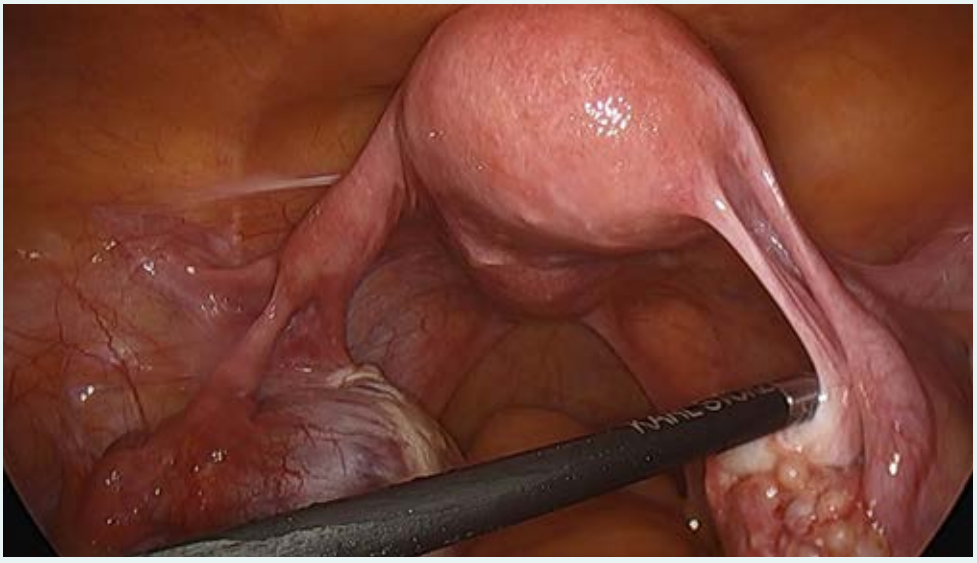

Fig 1 | **Pelvic structures at diagnostic laparoscopy for pelvic pain**

answer

SPOT DIAGNOSIS

Two abnormalities on diagnostic laparoscopy

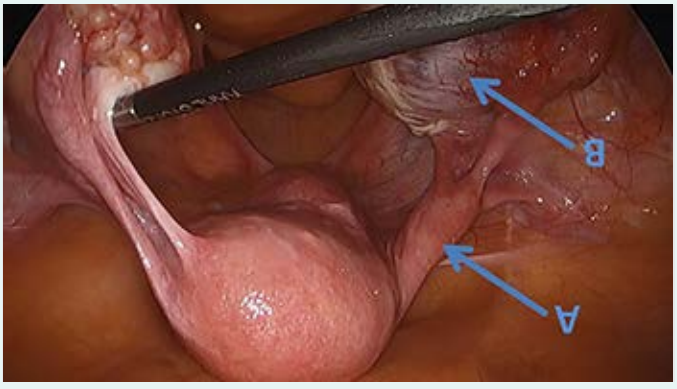

Fig 2 | **(A) Rudimentary uterine horn. (B) Ovarian cyst (incidental finding)**

The image shows a unicornuate uterus with a rudimentary uterine horn (fig 2, A) on the left side, and an incidental left ovarian cyst (fig 2, B).

Embryologically, the unicornuate uterus is thought to result from partial or complete failure of development of one of the paramesonephric (Mullerian) ducts.

The unicornuate uterus may exist alone or with a rudimentary horn, as in this case.

Renal abnormalities (most commonly renal agenesis) commonly co-exist with uterine malformations; therefore, a diagnosis of unicornuate uterus should prompt investigation of the urinary tract for congenital anomaly.

If a cavity is present in the rudimentary horn, and it is lined with endometrium, the rudimentary horn may be a cause of retrograde menstruation, haematometra, haemotosalpinx, and cyclical pelvic pain.

The incidental left ovarian cyst might be a source of the patient's pelvic pain instead of, or as well as, the unicornuate uterus.

CPD READING
0.5 HOURS

You can record CPD points for reading any article. We suggest half an hour to read and reflect on each.

LEARNING MODULE

Articles with a "learning module" logo have a linked BMJ Learning module at http://learning.bmj.com.

Severe coronary artery calcification in a patient with end stage renal disease

A 42 year old man was referred to the emergency department with a two month history of recurrent chest pain, which had become excruciating for the past 48 hours. His medical history included end stage renal disease secondary to hypertensive nephropathy, managed on haemodialysis for the past 10 years. Coronary computed tomography angiography, performed as part of the investigation, revealed diffuse coronary artery calcification involving all segments of left anterior descending, left circumflex, and right coronary artery (figure).

Vascular calcification is a common complication in patients with chronic kidney disease, and is considered a strong prognostic marker for all cause and cardiovascular mortality. Common risk factors for coronary calcification include serum calcium and phosphate disturbances, hypertension, diabetes, and hyperlipidaemia. The patient's chest pain improved with conservative medical management, which included aspirin, clopidogrel, β blockade, and glyceryl trinitrate. Diagnostic angiography and angioplasty were advised, but the patient declined these.

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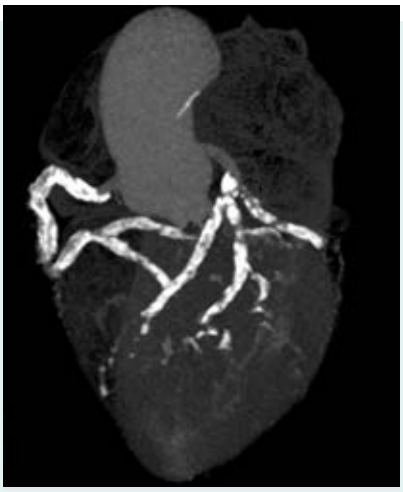
Patient consent obtained

Cite this as: *BMJ* 2018;362:k3887



Diagnosing sepsis in children

Most diagnostic aids for sepsis focus on clinical features that suggest that sepsis is present. A Delphi study in *Archives of Disease in Childhood* took the opposite approach, asking experienced clinicians who routinely assessed ill children about features that ruled it out (*Arch Dis Child*). The answers, at least in retrospect, seem rather obvious. Most agreed that, if a child was talking, playing, smiling, eating, or interacting with others, sepsis was unlikely. There was no agreement, however, on how reassuring it was to see a child using an electronic device.

Diet and psoriasis

People with psoriasis often ask if they could improve their skin condition by making changes to their diet. If they are obese, weight loss is likely to help, since excess body weight is linked with both increased severity of disease and reduced response to treatment, perhaps as a result of the pro-inflammatory effects of body fat. Apart from that, a recent systematic review suggests that the answer is negative (*JAMA Dermatol*). This review found no convincing evidence that dietary supplementation with fish oils, selenium, vitamin D, or multivitamins made any difference.

Wearable activity sensors

Many people wear devices that provide a daily step count, but whether this results in a persistent increase in levels of activity is another matter. A study from the US provided 400 volunteers with a tracker worn on the wrist and followed them for five months (*Br J Sports Med*). More than half the participants believed that wearing the tracker had increased their physical activity. However, the data showed that on average, step counts had declined.

Prescribing benzodiazepines

Guidelines are clear that benzodiazepines should be given only for short periods because of the risk of adverse effects and the potential to develop dependence. A survey in Pennsylvania that examined drug use in elderly people after a first prescription of a benzodiazepine finds that this recommendation is often ignored (*JAMA Intern Med*). More than a quarter of those prescribed one of these drugs were still using them a year later.

Time and motion

Cataract surgery is already the commonest operation in the UK and demand is rising. A time and motion study of cataract surgery in five hospitals finds a lot of variation in the way it is organised (*Br J Ophthalmol*). Judged by the number of cases dealt with in a routine 4 hour theatre session, optimal patient flow occurred in hospitals where the surgeon was supported by other healthcare professionals. If the least efficient hospitals were able to improve to the level of the most efficient, productivity would double.

Seasonal changes in cognition

Three longitudinal studies of older adults in the United States, Canada, and France find that cognitive performance varies by season (*PLoS Med*). Test scores were higher in summer and autumn than they were in winter and spring. This was true both for people with dementia and for people without evidence of cognitive decline. Adjustment for depressive symptoms, sleep, physical activity, and thyroid status made little difference. One implication is that time of year may need to be considered when analysing data from therapeutic trials and observational studies in people with impaired cognitive function.

Cite this as: *BMJ* 2018;362:k3975